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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,393	10/29/2003	Colt R. Correa	2485-000001/CPA	6397
27572 7590 04/09/2007 HARNESSE, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			EXAMINER WEI, ZHENG	
			ART UNIT 2192	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/09/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/696,393

Applicant(s)

CORREA, COLT R.

Examiner

Zheng Wei

Art Unit

2192

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/09/2006;01/26/2005</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the application filed on 10/29/2003.
2. Claims 1-15 are pending and have been examined.

Oath/Declaration

3. The Office acknowledges receipt of a properly signed oath/declaration filed on April 08, 2004.

Priority

4. The priority date considered for this application is 10/29/2003.

Information Disclosure Statement

5. The information disclosure statements filed 01/26/2005 and 11/09/2006 have been placed in the application file and the information referred to therein has been considered.

Drawings

6. The drawings filed on April 08, 2004 are accepted by the Examiner.

Specification

7. The application status needs to be updated in the section: CROSS-REFERENCE TO RELATED APPLICATION

Claim Objections

8. Claims 2 and 8 are objected to because of the following informalities:

Claims 2 and 8: Claim sentences seem to be incomplete (see for example, p.16, claim 2, "last line "...for the software program or"). For the purpose of compact prosecution, the examiner treats it as --for the software program.--

Appropriate correction is required.

Claim Rejections - 35 USC § 101

9. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

10. Claims 10-15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 10: Claim 10 claims a system, which comprises an instruction locator and an instruction replacement component. However, both of these components are software components implemented by instruction sequences. Such claimed software module/programs are software program listings per se and they do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer, which permit the computer program's functionality to be realized. Therefore, claim 10 is not statutory. See MPEP 2106.01(I)

Claims 11-15: Claims 11-15 are dependent claims of claim 10. These claims all fail to remedy the 35 USC 101 nonstatutory problem of claim 10.

--These rejections can be overcome by adding computer hardware components e.g., memory, and processor into the claims that permit the computer program's functionality to be realized.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 1-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Karp (Karp et al., US 2003/0061598)

Claim 1:

Karp discloses a method for controlling the value of a RAM variable inside an executable program, comprising:

- presenting a software program in executable form (object code) and having a plurality of machine instructions of a finite quantity of fixed lengths (see for example, Fig.1 element 60 and related text; also see p.1, [0019], lines 1-3,

"The object code includes a sequence of instructions I1 through In in object code");

- identifying at least one machine instruction that accesses a variable defined in random access memory associated with the software program (see for example, Fig.1, element 14, Fig.2, element 15, "Object Code Adapter" and related text; also see p.2, [0031], "uses the present techniques to adapt a set of object code");
- defining a replacement instruction for the at least one machine instruction (see for example, Fig.1, element 14, "O Object Code Adapter" and related text; also see p.1, [0020], "the object code adapter adapts the object code by providing hit instructions") and
- replacing the at least one machine instruction in the executable form of the software program with the replacement instruction (see for example, Fig.1, element 62 and related text; also see, p.1, [0021], "replaces the instruction I3 with a break instruction B1").

Claim 2:

Karp further discloses the method of claim 1 wherein the replacement instruction is further defined as a branch instruction (branch or return instruction) that references an address outside an address space for the software program (see for example, Fig.1, element 64 and related text; also see, p.1, [0022], "The hint code is code to be executed by the processor when the break instruction B1 is

executed")

Claim 3:

Karp also discloses the method of claim 1 wherein the replacement instruction is further defined as a no operation instruction (a branch prediction) (see for example, p.2, [0024], "Another example of a hint instruction is a branch prediction that specifies a likely result of a branch instruction in the sequence of instructions I1 to In").

Claim 4:

Karp further discloses the method of claim 1 wherein the replacement instruction is further defined as a instruction that can cause at least one of an interrupt and an exception to occur in the microprocessor (see for example, p.2, [0030], "process using a mechanism for handling break instructions which is built into the process and a hint register contained in the processor").

Claim 5:

Karp further discloses the method of claim 1 wherein the step of identifying at least one machine instruction further comprises

- determining location information for the at least one machine instruction within the software program (see for example, Fig.4, steps 110 "Examine the

Instruction Stream" and related text).

Claim 6:

Karp also discloses the method of claim 5 wherein the step of determining location information further comprises

- identifying an address for the at least one machine instruction using the image of the executable containing the machine instructions that comprise the executable (see for example, Fig.2 elements 11 Processor, 20 Memory, element 18 and element 15 Object Code Adapter and related text; also see Fig.4, steps 110 "Examine the Instruction Stream" and related text).

Claim 7.

Karp further discloses the method of claim 6 wherein the step of replacing the at least one machine instruction further comprises

- inserting the replacement instruction into a program memory image of the software program at said address (see for example, Fig.4, step 112, "Insert a Break Instruction into the Instruction Stream Where Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to Hint instruction is to be Executed" and related text).

Claim 8.

Karp also discloses the method of claim 2, wherein said branch instruction references a set of relocation instruction residing outside an address space for the software program (see for example, p.2, [0028] "the processor 10 may be designed to branch to a predetermined address").

Claim 9.

Karp The method of claim 1 further comprises

- executing the executable form of the software program having the replacement instruction (see for example, p.2, [0032], ""for execution by the processor by inserting a set of break instructions").

Claims 10-15:

Claims 10-15 are system version for performing the claimed method as in claims 1-10 addressed above, wherein all claimed limitation functions have been addressed and/or set forth above and certainly a computer system would need to run and/or practice such function steps disclosed by reference above. Thus, they also would have been obvious (see for example, Fig.5-6 and related text; also see, p.4, lines 10-42).


Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
- Lillich et al., (US 5,619,698) discloses a method and apparatus for patching operating systems.
 - Peter Dawson (US 7,168,068 B2) discloses a dynamic software code instrumentation method and system.
 - Kawai et al., (US 7,134,115 B2) discloses an apparatus, method and program for breakpoint setting.
 - Robert Hundt (US 2004/0205720 A1) discloses an augmenting debuggers
14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zheng Wei whose telephone number is (571) 270-1059 and Fax number is (571) 270-02059. The examiner can normally be reached on Monday-Thursday 8:00-15:00.
- If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571- 272-1000.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ZW


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SUPERVISORY PATENT EXAMINER